



West Virginia University®
COLLEGE OF BUSINESS AND ECONOMICS

BUREAU OF BUSINESS AND ECONOMIC RESEARCH

THE ECONOMIC IMPACT OF PUBLIC INSTITUTIONS OF HIGHER EDUCATION IN WEST VIRGINIA

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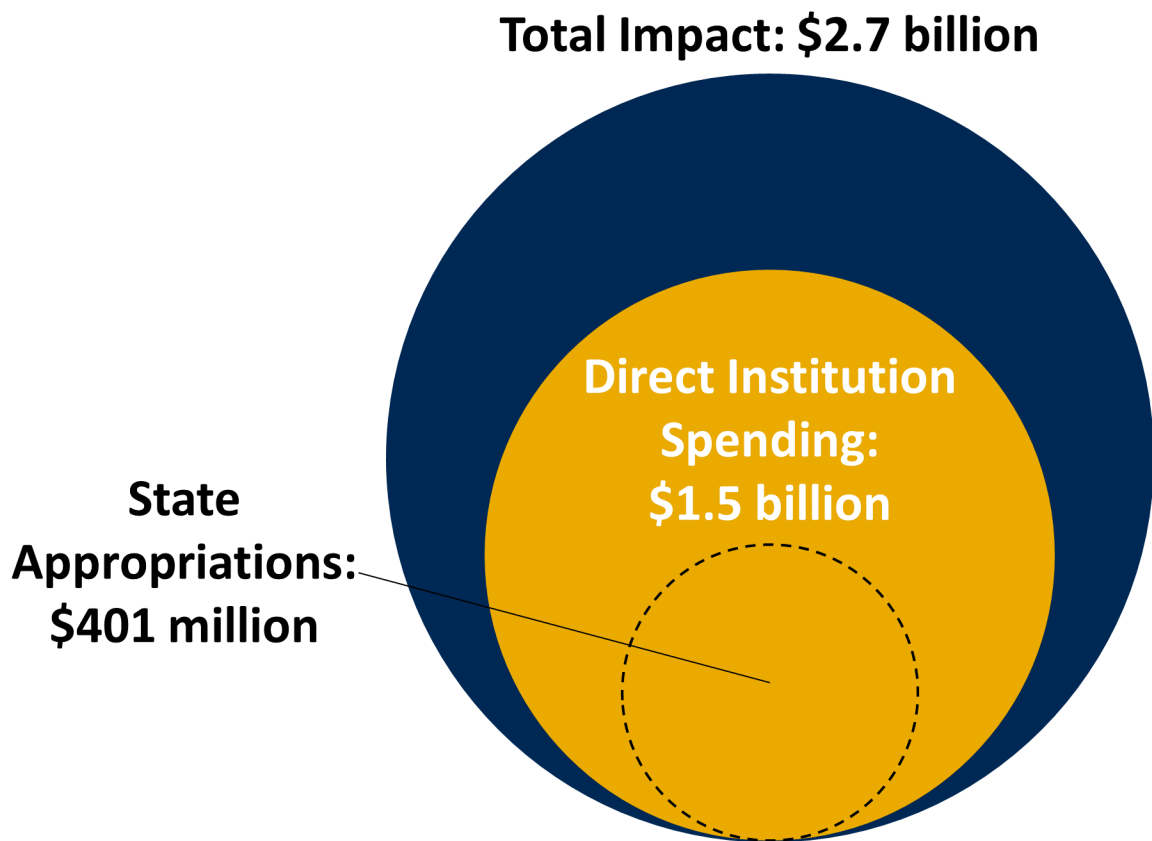


Executive Summary

West Virginia's public institutions of higher education are critical institutions for improving the educational attainment of the state's residents and workforce. However, aside from their educational benefits, these institutions are also important economic drivers in the communities where they are located. In this report we estimate the economic impact of the state's two- and four-year colleges and universities on the counties and metropolitan areas that house them.

We estimate that the state's institutions of higher education spent approximately \$1.5 billion in 2014 and this spending generated another \$1.2 billion in economic activity (see Figure 1) for a total impact of \$2.7 billion. Of this total, \$401 million was appropriated by the state government, with \$1.1 billion coming from university sources. This higher education spending supported more than 24 thousand jobs statewide.

Figure 1: Total Economic Impact

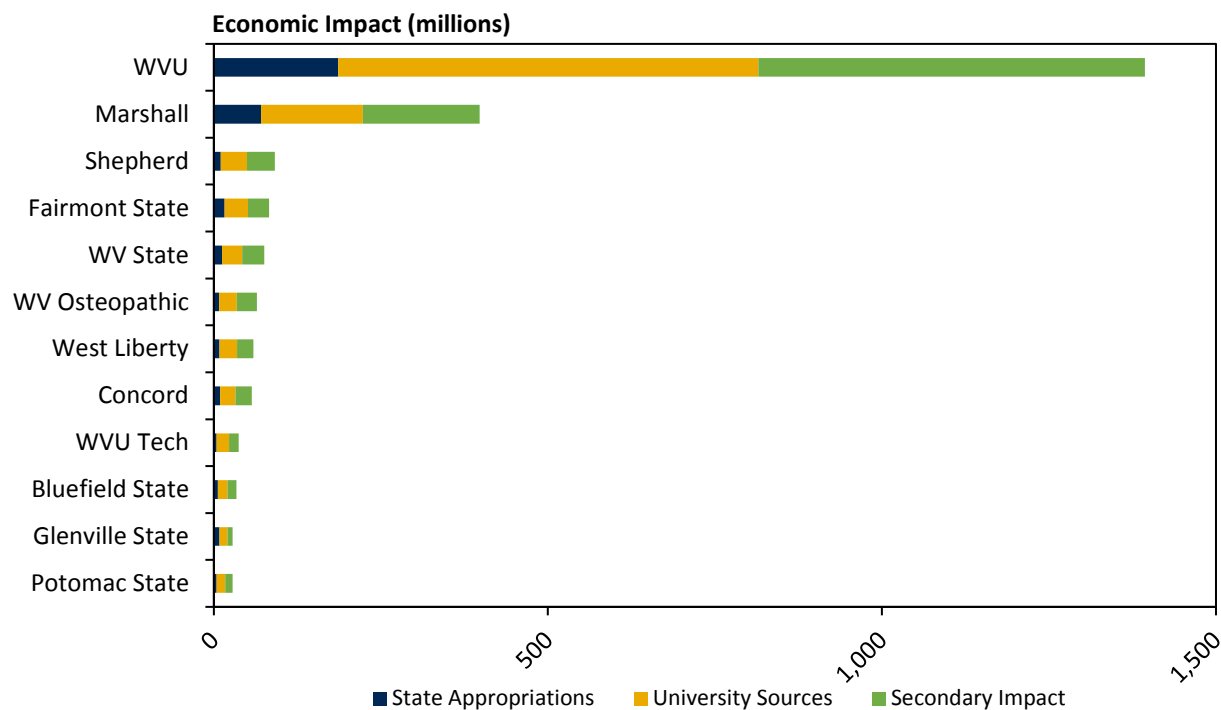


Four-Year Colleges and Universities

As the largest university in the state, West Virginia University's main campus had the greatest economic impact on its region (see Figure 2). WVU spent approximately \$815 million in direct expenditures in the local economy, of which \$186 million came from state appropriations. Combined with student expenditures, WVU's operating budget generated an additional \$578 million in secondary economic activity, for a total impact of nearly \$1.3 billion.

Marshall University's 2014 budget was \$261 million, of which \$71 million came from state appropriations. This spending generated an additional \$174 million in economic activity for a total economic impact of \$398 million. The remaining four-year institutions had combined expenditures of approximately \$324 million with a total impact of \$556 million.

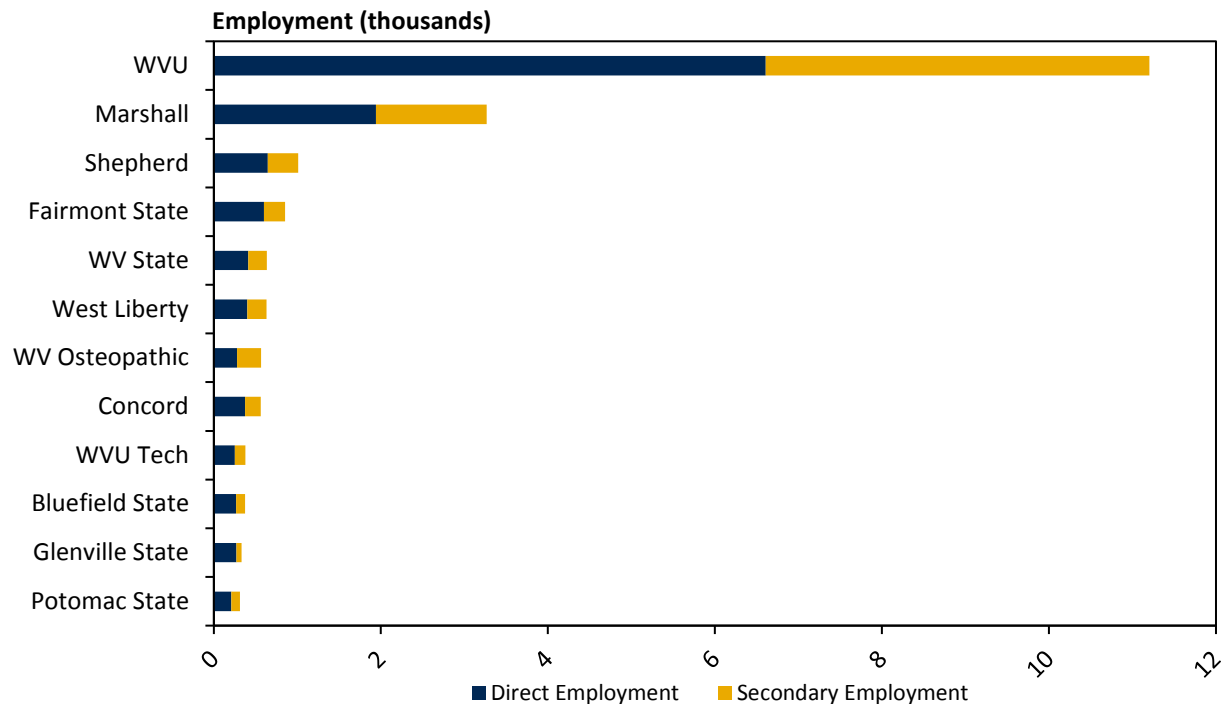
Figure 2: Economic Impacts for Four-Year Institutions



Source: IPEDS, Author Calculations

WVU also had the largest number of employees (see Figure 3) with about 6,600 people directly employed at the university. The university's spending supported another 4,600 jobs in the surrounding area for a total employment impact of more than 11,200 jobs. Marshall University directly employed more than 1,900 workers and supported another 1,300 through secondary impacts for a total employment impact of nearly 3,300 workers. The other institutions employed a total of more than 3,710 workers and supported an additional 1,940 jobs through secondary impacts for a total employment impact of about 5,650 workers.

Figure 3: Employment Impacts for Four-Year Colleges and Universities

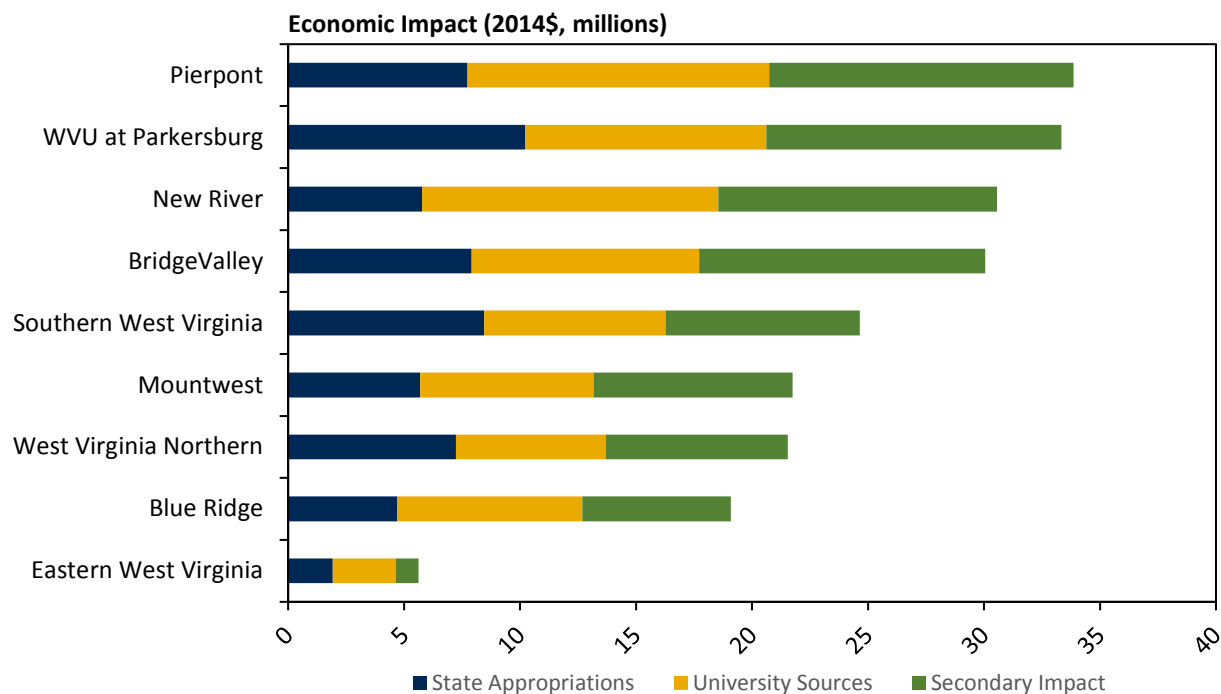


Source: IPEDS, Author Calculations

Two-Year Colleges

Among two-year colleges, Pierpont Community and Technical College had the largest economic impact at nearly \$34 million (Figure 4). Pierpont's direct expenditures totaled about \$21 million, of which about \$8 million came from state appropriations. WVU at Parkersburg was a close second with a total economic impact of \$33 million generated from \$21 million in direct expenditures.

Figure 4: Economic Impacts for Two-Year Community and Technical Colleges

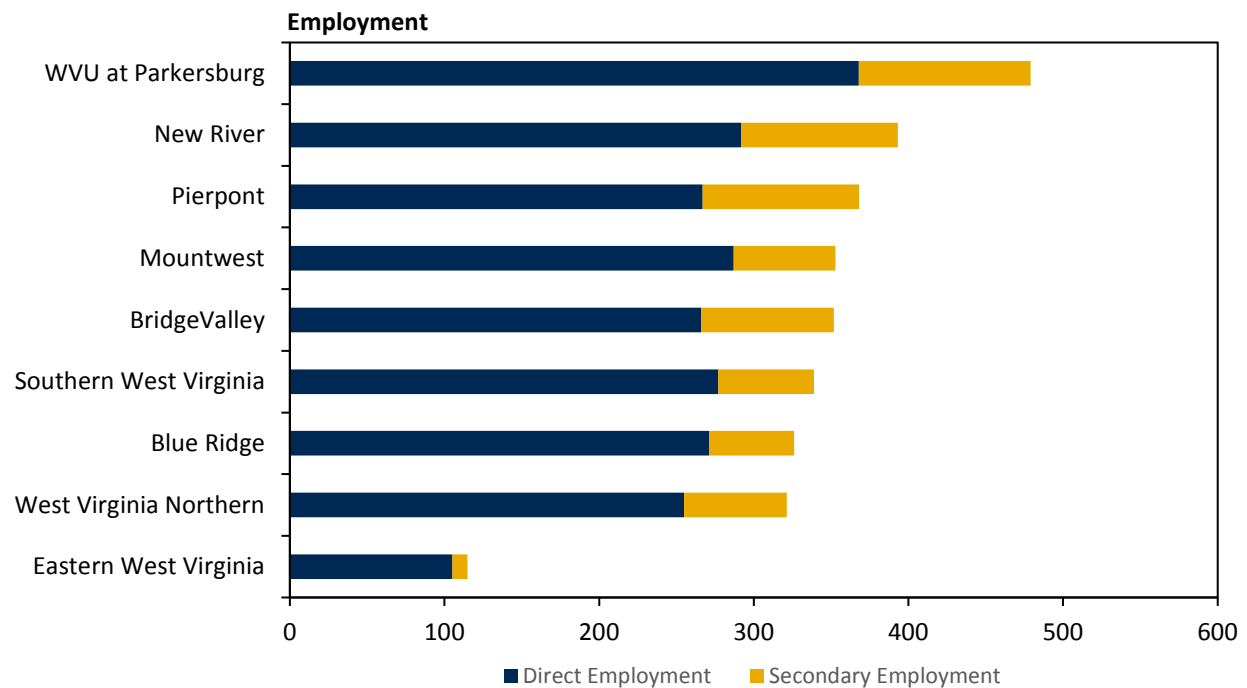


Source: IPEDS, Author Calculations



WVU at Parkersburg generated the largest employment impact among two-year colleges (see Figure 5). The college employed 368 people and supported an additional 111 workers through secondary economic impacts. New River Community and Technical College had the second-largest employment impact, supporting a total of 393 workers in the local economy, of which 292 were employed directly at the college. Pierpont was third with a total employment impact of 368, of which 267 were employed directly by the college.

Figure 5: Employment Impacts for Two-Year CTCs



Source: IPEDS, Author Calculations

1 Introduction

West Virginia's public institutions of higher education are critical institutions for improving the educational attainment of the state's residents and workforce. However, aside from their educational benefits, these institutions are also important economic drivers in the communities where they are located. In this report, we estimate the economic impact in fiscal year 2014 of the state's two- and four-year colleges and universities on the counties and metropolitan areas that house them.

We begin with some background on the economic impact methodology. In Section 3, we estimate the economic impact of the state's four-year colleges and universities, followed in Section 4 by the impact of the state's two-year community and technical colleges. The final section examines the impact of all of the institutions on the entire state economy.

2 Background

Estimating the economic impact of an institution such as a university or college in a local community is often complex. Colleges and universities are generally highly integrated into the economy of the local region, and it is difficult to disentangle the effects of the university from other factors that drive economic development.

Because of the highly integrated nature of universities in their local communities, some critics of economic impact studies on universities have argued that these studies sometimes overstate institutional impacts. Siegfried et al. (2007), for example, argues that studies of the impact of higher education often include impacts that would be felt in the community regardless of the presence of the institution of higher education.¹ Siegfried also argues that most studies do not explicitly attempt to define a counterfactual condition that estimates the economic gain generated by the university to local residents who would be living in the region if the university were not located there.

With this criticism in mind, we explicitly define our a counterfactual scenario as one where the university is eliminated from the local economy and that the remainder of the economy does not respond to the loss of the university. Assuming that the region's economy would not be changed if the university were to suddenly disappear is, of course, a considerable simplification of the economic reality in these communities. However, this methodology allows us to assess the institution's total contributions to the local economy, an approach that has become known in the economic impact literature as "economic footprint analysis." This technique has been followed in several other recent university economic impact studies.²

Another assumption we make in this study is that all of the direct economic impacts are felt, at least initially, within the region surrounding each school. For example, the largest expenditure for all of the

¹ Siegfried, John J., Allen R. Sanderson, and Peter McHenry. "The Economic Impact of Colleges and Universities." *Economics of Education Review* 26, no. 5 (2007): 546-58.

² For example, "Indiana University Impact Study, 2008." Indiana Business Research Center at Indiana University's Kelley School of Business, http://www.ibrc.indiana.edu/studies/IUimpact/IU_impact_systemwide_final.pdf; NorthStar Economics, Inc. "The University of Wisconsin-Madison's \$12.4 Billion Impact on the Wisconsin Economy." http://www.news.wisc.edu/news/docs/UW-Madison_Economic_Impact_Study.pdf.



schools is for employee compensation, and we implicitly assume that all employees of the institution live and spend their household income in the county or metropolitan area where they work. This may not necessarily be the case, especially for smaller schools, or those in non-metropolitan areas. Because of this assumption, the impact estimates presented here should be considered the maximum impact of these institutions in their respective regions.

2.1 Methodology

In this report, we examine the economic impact of the following expenditure categories for all of the state's institutions of higher education:

- Direct university expenditures, including supplies and services, utilities, and other operating expenses.
- University payroll, which include wages and benefits to the university's employees.

For four year institutions, we also consider:

- Out-of-state student expenditures in the local economy.

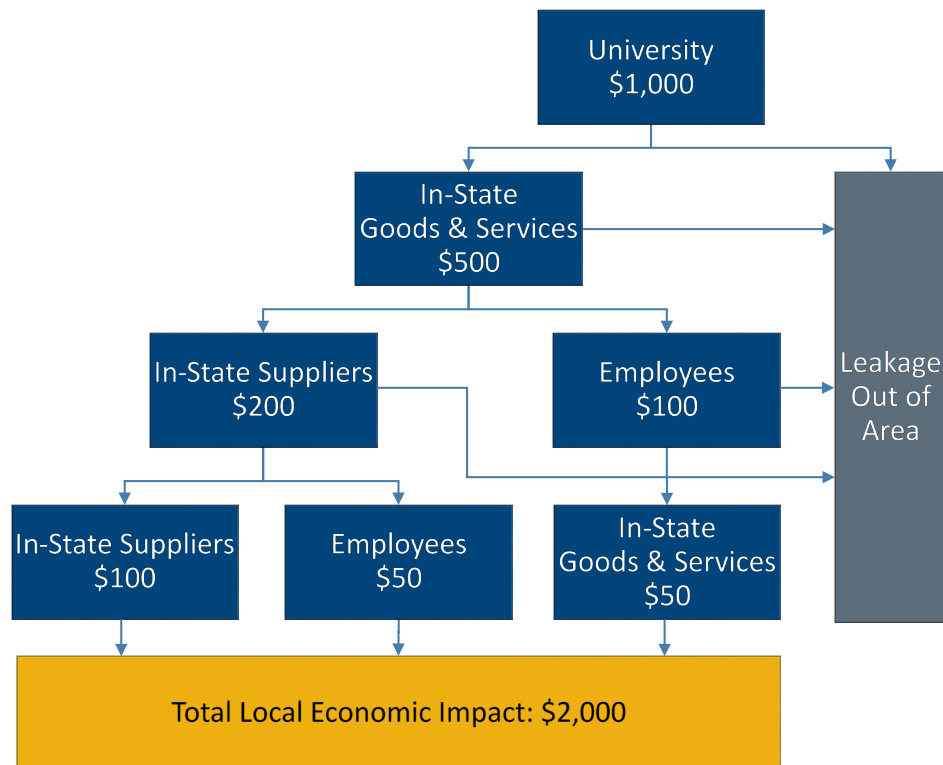
To estimate these economic impacts of each campus, we use a sophisticated model of the West Virginia economy.³ The economic impact of the college or university starts with an estimate of the university's annual spending in the local economy, as described above. This is called the direct impact of the economic enterprise. However, the total impact is not limited to the direct impact, but also includes the secondary economic impact accrued as those expenditures are re-spent through the rest of the economy.

For example, as depicted in Figure 6, each year the university purchases a variety of goods and services, such as office supplies, electricity, landscaping services, etc. As the suppliers of these inputs increase production, their subsequent suppliers will increase production, and so on. Also, the university employs thousands of workers, part of whose income will be spent in the local economy, generating more output, income, and employment impact. Lastly, out-of-state students who move to West Virginia to attend college import money from outside the state to be spent in the local economy, which also raises the income of local businesses. These secondary impacts together form what is known as the "multiplier effect." The original stimulus to the economy from the institution's expenditures is re-spent multiple times through the rest of the economy. At each stage some of the expenditures "leak" out of the region as they are spent at companies outside the state. The combined direct impact and secondary impacts together constitute the total economic impact of the university's operations.

³ This study was conducted using the IMPLAN modeling software, an industry-standard input-output model of the economy. More information about IMPLAN can be found at <http://www.implan.com>.



Figure 6: Economic Impact Flow



2.1.1 University or College Expenditures

To estimate the economic impact of each college or university's institutional expenditures, we start with the annual budget of the institution. However, many categories of expenditures do not have impacts in the local economy. We have made every effort to adjust each institution's accounting records to avoid considering expenditure amounts that have the potential to be double counted or do not impact the local economy. In particular, in arriving at the direct expenditures for each institution, we have excluded the following from the financial statements:

- Scholarship expenditures: These expenditures return to the university in the form of tuition and fees. As such, they are already counted among the rest of the institution's expenditures, and thus do not constitute additional local economic impact.
- Transfers between units within the college or university: These transfers become revenue to other university entities, and thus are captured in their expenditures.
- Depreciation expenses: Even though depreciation is appropriately counted as an expense in accounting records, it does not actually represent an expenditure in the local economy.
- In-state student expenditures: These expenditures are simply transfers from one part of the state to another, so they do not constitute new expenditures in the state's economy.

2.1.2 Student Spending

Aside from the institution's operating expenditures, we also consider the impact of student spending in the local economy. However, we do not consider expenditures of in-state students to be relevant to this analysis. These expenditures are essentially a transfer of economic activity from one part of the state to another part of the state. If these outlays were not spent in the institution's home county, they would likely be made somewhere else in the state, and thus do not represent additional economic impact to the state. We instead limit the student impact to expenditures from students who moved to West Virginia from outside of the state, which do represent new spending to the state.

To calculate the economic impact of the student population, we used estimates of student spending in several categories, including room and board, books and supplies, transportation, and other expenditures. Expenditures for tuition, and room and board for students living on campus were excluded from the calculation, as these expenditures are returned to the university as revenue. For off-campus students we allocated room and board expenditures according to national averages for housing and food expenditures based on percentages estimated in the US Bureau of Labor Statistics Consumer Expenditure Survey.⁴ Books and supplies were allocated to bookstores and other retail businesses. And the remainder of the expenditures were allocated according to standard spending patterns for local residents. We then multiplied these average expenditures by the number of out of state students to get the total household spending in the economy.⁵

Because the large majority of students who attend West Virginia's two-year community and technical colleges come from within the state, we have excluded student expenditures from our analysis of these schools.

2.1.3 State Tax Revenue

As state agencies, the colleges and universities in this report do not pay state or local taxes directly. However, the institutions do generate state tax revenue in the form of personal income taxes from their employees, sales taxes paid by workers in local businesses, and corporation net income taxes paid by companies that receive income from the university's direct spending. We estimate these revenues to the state government in our calculations below.

2.1.4 Data

Most of the data for the economic impact calculations comes from the Integrated Postsecondary Education Data System (IPEDS).⁶ We use the operating expenditures and employee compensation reported in the IPEDS dataset for calculating operational impacts from each of the state's colleges and universities.

For student expenditures, we use a combination of data from IPEDS and each institution's Common Data Set, if available. Enrollment numbers come from IPEDS, while the Common Data Set provides estimates

⁴ US Bureau of Labor Statistics. "Consumer Expenditure Survey." US Bureau of Labor Statistics, <http://www.bls.gov/cex/>.

⁵ Student wages have been eliminated from the analysis to avoid double-counting the impact of these expenditures.

⁶ "Integrated Postsecondary Education Data System." National Center for Education Statistics, <https://nces.ed.gov/ipeds/>.



of the number of students who live on- and off-campus. Data for on-campus percentages for Glenville State University, Marshall University, and Shepherd University were gathered by personal correspondence.

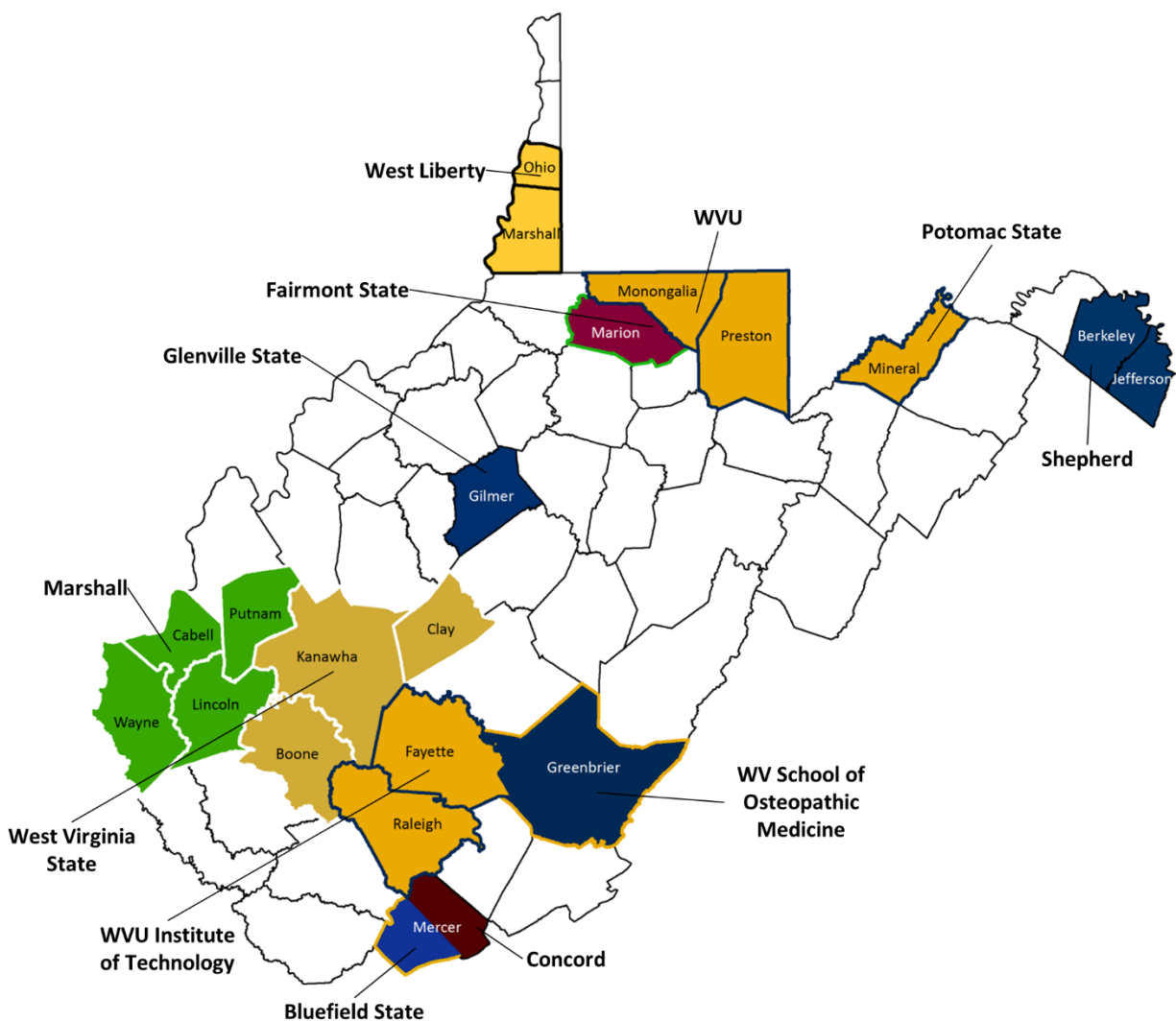


3 Economic Impact of Four-Year Colleges and Universities

This section provides details on the economic impact of each of the state's 12 four-year colleges and universities. We present both the direct economic impacts and the secondary impacts from the colleges and universities analyzed in this report.

For each of the institutions, we consider the economic impact on the metropolitan statistical area (MSA) where they are located. If the institution is located outside an MSA, we consider the impact on its home county. Figure 7 shows the location of each school and the counties that are included in the analysis of its economic impact.

Figure 7: Location of Economic Impact for Four-Year Institutions



3.1 Bluefield State College

Bluefield State College's main campus in Bluefield had a total budget of more than \$23 million in fiscal year 2014, and employed 266 people. Of Bluefield State College's initial budget, approximately \$1.3 million was excluded from direct impact because it represents depreciation, scholarships, and inter-university transfers. Approximately \$14.7 million was spent on compensation for the university's employees. The remaining \$5.6 million was allocated as other university spending. We estimate that the college's operational expenditures generated an additional \$13 million in secondary economic activity for a total economic impact of \$33.3 million (See Table 1). These expenditures supported 369 jobs with total compensation of \$18.5 million. Spending by the university indirectly generated approximately \$800 thousand in selected state tax revenue.

Bluefield had 1,747 students enrolled in 2014, of which about 35 were out-of-state residents. We estimate that the total impact on the local economy of these students' expenditures was approximately \$407 thousand in business volume. This spending supported 3 jobs with employee compensation of about \$87 thousand. Student expenditures also supported about \$18 thousand in state tax revenue.

Combining the annual economic impact of Bluefield State College's expenditures and out-of-state student expenditures, we estimate that the total annual economic impact of the college on the local economy was about \$33.7 million. Approximately 372 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$18.5 million in compensation and generated about \$800 thousand in state tax revenue.



Table 1: Economic Impact of Bluefield State College

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	20.3	13.0	33.3
Employment (jobs)	266	103	369
Employee Compensation (\$, millions)	14.7	3.7	18.5
Total Taxes (\$, millions)*	0.6	0.2	0.8
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	0.4	0.4
Employment (jobs)	n/a	3	3
Employee Compensation (\$, millions)	n/a	87.6	87.6
Total Taxes (\$, thousands)*	n/a	17.9	17.9
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	20.3	13.4	33.7
Employment (jobs)	266	106	372
Employee Compensation (\$, millions)	14.7	3.8	18.5
Total Taxes (\$, millions)*	0.6	0.2	0.8

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.2 Concord University

Concord University's fiscal year 2014 budget was almost \$41 million, and it employed 266 people. Of Concord University's initial budget we excluded approximately \$6.8 million in depreciation, scholarships, and inter-university transfers from the direct impact. Approximately \$21.5 million was spent on compensation for the university's employees. The remaining \$10.9 million was allocated as other university spending. We estimate that the college's operational expenditures generated an additional \$20.9 million in secondary economic activity for a total economic impact of \$53.2 million (see Table 2). These expenditures supported 537 jobs with total compensation of \$27.4 million. Spending by the university indirectly generated approximately \$1.2 million in selected state tax revenue.

Fall 2013 student enrollment at Concord was 2,809 students, of which about 420 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$3.3 million in business volume. This spending supported 26 jobs with employee compensation of about \$762 thousand. Student expenditures also supported about \$44 thousand in various state taxes.

Combining the annual economic impact of Concord University's expenditures and out-of-state student expenditures, we estimate that the total annual economic impact of the college on the local economy was about \$56.6 million. Approximately 563 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$28.1 million in compensation and generated about \$1.2 million.



Table 2: Economic Impact of Concord University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	32.3	20.9	53.2
Employment (jobs)	374	163	537
Employee Compensation (\$, millions)	21.5	5.9	27.4
Total Taxes (\$, millions)*	0.9	0.3	1.2
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	3.3	3.3
Employment (jobs)	n/a	26	26
Employee Compensation (\$, thousands)	n/a	762.0	762.0
Total Taxes (\$, thousands)*	n/a	43.7	43.7
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	32.3	24.2	56.6
Employment (jobs)	374	189	563
Employee Compensation (\$, millions)	21.5	6.7	28.1
Total Taxes (\$, millions)*	0.9	0.3	1.2

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.3 Fairmont State University

Fairmont State University's fiscal year 2014 budget was \$63.6 million, and it employed 601 workers. We excluded approximately \$12.7 million in depreciation, scholarships, and inter-university transfers from the direct impact. Approximately \$33.6 million was spent on compensation for the university's employees. The remaining \$17.2 million was allocated as other university spending. We estimate that the college's operational expenditures generated an additional \$28.3 million in secondary economic activity for a total economic impact of \$79.2 million (See Table 3). These expenditures supported 823 jobs with total compensation of \$41.9 million. Spending by the university indirectly generated approximately \$1.8 million in selected state tax revenue.

Fall 2013 student enrollment at Fairmont State was 4,232 students, of which about 339 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$3.5 million in business volume. This spending supported 30 jobs with employee compensation of about \$849 thousand. Student expenditures also supported about \$59 thousand in various state taxes.

We estimate that the total annual economic impact of Fairmont State on the local economy was about \$82.6 million in FY 2014. Approximately 853 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$42.7 million in compensation and generated about \$1.9 million in state tax revenue.



Table 3: Economic Impact of Fairmont State University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	50.9	28.3	79.2
Employment (jobs)	601	222	823
Employee Compensation (\$, millions)	33.6	8.2	41.9
Total Taxes (\$, thousands)*	1.4	0.4	1.8
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	3.5	3.5
Employment (jobs)	n/a	30	30
Employee Compensation (\$, thousands)	n/a	849.4	849.4
Total Taxes (\$, thousands)*	n/a	59.1	59.1
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	50.9	31.8	82.6
Employment (jobs)	601	252	853
Employee Compensation (\$, millions)	33.6	9.1	42.7
Total Taxes (\$, millions)*	1.4	0.4	1.9

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.4 Glenville State College

Glenville State College's fiscal year 2014 budget was \$27.2 million, and it had 271 employees. We excluded approximately \$7 million in depreciation, scholarships, and inter-university transfers from the direct impact. Approximately \$14.1 million was spent on compensation for the university's employees. The remaining \$6.2 million was allocated as other university spending. We estimate that the college's operational expenditures generated an additional \$5.7 million in secondary economic activity for a total economic impact of \$26 million (See Table 4). These expenditures supported 316 jobs with total compensation of \$15.3 million. Spending by the university indirectly generated approximately \$660 thousand in selected state tax revenue.

Fall 2013 student enrollment at Glenville State was 1,850 students, of which about 278 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$2 million in business volume. This spending supported 17 jobs with employee compensation of about \$403 thousand. Student expenditures also supported about \$11 thousand in various state taxes.

We estimate that the total annual economic impact of Glenville State on the local economy was about \$27.9 million in FY 2014. Approximately 333 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$15.7 million in compensation and generated about \$671 thousand in state tax revenue.



Table 4: Economic Impact of Glenville State College

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	20.2	5.7	26.0
Employment (jobs)	271	45	316
Employee Compensation (\$, millions)	14.1	1.2	15.3
Total Taxes (\$, thousands)*	586.6	59.0	659.8
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	2.0	2.0
Employment (jobs)	n/a	17	17
Employee Compensation (\$, thousands)	n/a	403.3	403.3
Total Taxes (\$, thousands)*	n/a	11.1	11.1
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	20.2	7.7	27.9
Employment (jobs)	271	62	333
Employee Compensation (\$, millions)	14.1	1.6	15.7
Total Taxes (\$, thousands)*	586.6	70.1	670.9

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.5 Marshall University

Marshall University's fiscal year 2014 budget was \$260.5 million. We excluded approximately \$37.6 million in depreciation, scholarships, and inter-university transfers from the direct impact. The university spent approximately \$156.1 million on compensation for the university's 1,939 employees. The remaining \$66.8 million was allocated as other university spending. We estimate that the college's operational expenditures generated an additional \$145 million in secondary economic activity for a total economic impact of \$367.9 million (See Table 5). These expenditures supported 3,055 jobs with total compensation of \$200 million. Spending by the university indirectly generated approximately \$8.7 million in selected state tax revenue.

Fall 2013 student enrollment at Marshall was 13,407 students, of which about 3,084 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$29.8 million in business volume. This spending supported 212 jobs with employee compensation of about \$7.3 million. Student expenditures also supported about \$201 thousand in various state taxes.

We estimate that the total annual economic impact of Marshall University on the local economy was about \$397.7 million in FY 2014. Approximately 3,267 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$207.2 million in compensation and generated about \$9.2 million in state tax revenue.



Table 5: Economic Impact of Marshall University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	222.9	145.0	367.9
Employment (jobs)	1,939	1,116	3,055
Employee Compensation (\$, millions)	156.1	43.8	199.9
Total Taxes (\$, millions)*	6.5	2.0	8.7
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	29.8	29.8
Employment (jobs)	n/a	212	212
Employee Compensation (\$, millions)	n/a	7.3	7.3
Total Taxes (\$, millions)*	n/a	461.5	461.5
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	222.9	174.8	397.7
Employment (jobs)	1,939	1,328	3,267
Employee Compensation (\$, millions)	156.1	51.1	207.2
Total Taxes (\$, millions)*	6.5	2.5	9.2

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.6 Potomac State College

Potomac State College's fiscal year 2014 budget was approximately \$19.6 million, of which \$2.6 million went to depreciation, scholarships, and inter-university transfers. The university spent about \$12 million on compensation for the university's 207 employees. The remaining \$5 million was allocated as other university spending. We estimate that the college's operational expenditures generated \$6.1 million in secondary economic activity for a total economic impact of \$23.1 million (See Table 6). These expenditures supported 264 jobs with total compensation of \$13.9 million. Spending by the university indirectly generated approximately \$600 thousand in selected state tax revenue.

Fall 2013 student enrollment at Potomac State was 1,600 students, of which about 714 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$4.8 million in business volume. This spending supported 48 jobs with employee compensation of about \$1.7 million. Student expenditures also supported about \$49 thousand in various state taxes.

We estimate that the total annual economic impact of Potomac State College on the local economy was about \$27.9 million in FY 2014. Approximately 312 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$15.7 million in compensation and generated about \$649 thousand in state tax revenue.



Table 6: Economic Impact of Potomac State College

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	17.0	6.1	23.1
Employment (jobs)	207	57	264
Employee Compensation (\$, millions)	12.0	1.9	13.9
Total Taxes (\$, thousands)*	501.3	86.7	600.0
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	4.8	4.8
Employment (jobs)	n/a	48	48
Employee Compensation (\$, millions)	n/a	1.8	1.8
Total Taxes (\$, thousands)*	n/a	48.7	48.7
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	17.0	10.9	27.9
Employment (jobs)	207	105	312
Employee Compensation (\$, millions)	12.0	3.6	15.7
Total Taxes (\$, thousands)*	501.3	135.5	648.7

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.7 Shepherd University

Shepherd University had a total budget of \$60.8 million in fiscal year 2014, of which \$11.9 million went to depreciation, scholarships, and inter-university transfers. The university spent about \$32.6 million on compensation for the university's 647 employees. Another \$17.1 was allocated to other university spending. We estimate that the college's operational expenditures generated \$26.4 million in secondary economic activity for a total economic impact of \$76.1 million (See Table 7). These expenditures supported 873 jobs with total compensation of \$40 million. Spending by the university indirectly generated approximately \$1.7 million in selected state tax revenue.

Fall 2013 student enrollment at Shepherd University was 4,041 students, of which about 1,679 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$15.1 million in business volume. This spending supported 138 jobs with employee compensation of about \$3.4 million. Student expenditures also supported about \$94 thousand in various state taxes.

We estimate that the total annual economic impact of Shepherd University on the local economy was about \$ 91.1 million in FY 2014. Approximately 1,012 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$43.4 million in compensation and generated about \$1.8 million in state tax revenue.



Table 7: Economic Impact of Shepherd University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	49.7	26.4	76.1
Employment (jobs)	647	226	873
Employee Compensation (\$, millions)	32.6	7.4	40.0
Total Taxes (\$, thousands)*	1.4	0.3	1.7
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	15.1	15.1
Employment (jobs)	n/a	138	138
Employee Compensation (\$, millions)	n/a	3.4	3.4
Total Taxes (\$, thousands)*	n/a	94.3	94.3
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	49.7	41.5	91.1
Employment (jobs)	647	365	1,012
Employee Compensation (\$, millions)	32.6	10.8	43.4
Total Taxes (\$, millions)*	1.4	0.4	1.8

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.8 West Liberty University

West Liberty University's fiscal year 2014 budget was approximately \$40.3 million, of which \$5.7 million went to depreciation, scholarships, and inter-university transfers. The university spent about \$23.6 million on compensation for the university's 400 employees, and the remaining \$10.9 million was allocated as other university spending. We estimate that the college's operational expenditures generated \$18.2 million in secondary economic activity for a total economic impact of \$52.8 million (see Table 8). These expenditures supported 560 jobs with total compensation of \$29.5 million. Spending by the university indirectly generated approximately \$1.3 million in selected state tax revenue.

Fall 2013 student enrollment at West Liberty was 2,776 students, of which about 888 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$6.5 million in business volume. This spending supported 69 jobs with employee compensation of about \$1.9 million. Student expenditures also supported about \$51 thousand in various state taxes.

We estimate that the total annual economic impact of West Liberty on the local economy was about \$50.2 million in FY 2014. Approximately 629 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$31.4 million in compensation and generated about \$1.3 million in state tax revenue.



Table 8: Economic Impact of West Liberty University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	34.5	18.2	52.8
Employment (jobs)	400	160	560
Employee Compensation (\$, millions)	23.6	5.9	29.5
Total Taxes (\$, millions)*	1.0	0.3	1.3
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	6.5	6.5
Employment (jobs)	n/a	69	69
Employee Compensation (\$, millions)	n/a	1.9	1.9
Total Taxes (\$, thousands)*	n/a	51.1	51.1
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	34.5	24.7	59.2
Employment (jobs)	400	229	629
Employee Compensation (\$, millions)	23.6	7.8	31.4
Total Taxes (\$, millions)*	1.0	0.3	1.3

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.9 West Virginia School of Osteopathic Medicine

West Virginia School of Osteopathic Medicine (WVSOM) had a fiscal year 2014 budget of approximately \$37.1 million, of which \$2.8 million went to depreciation, scholarships, and inter-university transfers. The university spent about \$23.7 million on compensation for the university's 279 employees, and the remaining \$10.6 million was allocated as other university spending. We estimate that the college's operational expenditures generated \$19.6 million in secondary economic activity for a total economic impact of \$53.9 million (see Table 9). These expenditures supported 449 jobs with total compensation of \$29.4 million. Spending by the university indirectly generated approximately \$1.3 million in selected state tax revenue.

Fall 2013 student enrollment at WVSOM was 816 students, of which about 560 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$10.7 million in business volume. This spending supported 117 jobs with employee compensation of about \$2.8 million. Student expenditures also supported about \$77 thousand in various state taxes.

We estimate that the total annual economic impact of WVSOM on the local economy was about \$64.6 million in FY 2014. Approximately 566 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$32.2 million in compensation and generated about \$1.4 million in state tax revenue.



Table 9: Economic Impact of West Virginia School of Osteopathic Medicine

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	34.3	19.6	53.9
Employment (jobs)	279	170	449
Employee Compensation (\$, millions)	23.7	5.7	29.4
Total Taxes (\$, millions)*	1.0	0.3	1.3
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	10.7	10.7
Employment (jobs)	n/a	117	117
Employee Compensation (\$, thousands)	n/a	2.8	2.8
Total Taxes (\$, thousands)*	n/a	77.3	77.3
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	34.3	30.3	64.6
Employment (jobs)	279	287	566
Employee Compensation (\$, millions)	23.7	8.5	32.2
Total Taxes (\$, millions)*	1.0	0.3	1.4

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.10 West Virginia State University

West Virginia State University had a fiscal year 2014 budget of approximately \$48.5 million, of which \$5.7 million went to depreciation, scholarships, and inter-university transfers. The university spent about \$27.5 million on compensation for the university's 411 employees, and the remaining \$15.1 million was allocated as other university spending. We estimate that the college's operational expenditures generated \$30.5 million in secondary economic activity for a total economic impact of \$73.1 million (see Table 10). These expenditures supported 619 jobs with total compensation of \$37.5 million. Spending by the university indirectly generated approximately \$1.6 million in selected state tax revenue.

Fall 2013 student enrollment at West Virginia State was 2,677 students, of which about 8 percent were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$2.1 million in business volume. This spending supported 15 jobs with employee compensation of about \$631 thousand. Student expenditures also supported about \$17 thousand in various state taxes.

We estimate that the total annual economic impact of West Virginia State on the local economy was about \$75.2 million in FY 2014. Approximately 634 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$38.2 million in compensation and generated about \$1.7 million in state tax revenue.



Table 10: Economic Impact of West Virginia State University

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	42.6	30.5	73.1
Employment (jobs)	411	208	619
Employee Compensation (\$, millions)	27.5	10.1	37.5
Total Taxes (\$, millions)*	1.1	0.5	1.6
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	2.1	2.1
Employment (jobs)	n/a	15	15
Employee Compensation (\$, thousands)	n/a	630.9	630.9
Total Taxes (\$, thousands)*	n/a	17.4	17.4
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	42.6	32.6	75.2
Employment (jobs)	411	223	634
Employee Compensation (\$, millions)	27.5	10.7	38.2
Total Taxes (\$, millions)*	1.1	0.5	1.7

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.11 WVU Main Campus

West Virginia University's main campus in Morgantown had a fiscal year 2014 budget of approximately \$940 million, of which \$124.9 million in depreciation, scholarships, and inter-university transfers was excluded from the direct impact.⁷ The university spent about \$577.1 million on compensation for the university's 6,609 employees, and the remaining \$238 million was allocated to other university spending. We estimate that the college's operational expenditures generated \$460.7 million in secondary economic activity for a total economic impact of \$1.3 billion (see Table 11). These expenditures supported 10,257 jobs with total compensation of \$717.7 million. Spending by the university indirectly generated approximately \$31.2 million in selected state tax revenue.

Fall 2013 student enrollment at WVU's main campus was 29,466 students, of which about 49 percent were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$117.8 million in business volume. This spending supported 946 jobs with employee compensation of about \$30.7 million. Student expenditures also supported about \$846 thousand in various state taxes.

We estimate that the total annual economic impact of WVU's main campus on the local economy was about \$1.4 billion in FY 2014. Approximately 11,202 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$748.4 million in compensation and generated about \$32 million in state tax revenue.

⁷ In 2015 the WVU Bureau of Business & Economic Research published "The Economic Impact of West Virginia University on North Central West Virginia." The current report is not comparable to the 2015 report for two reasons: First, this report considers a different geographic area compared to the 2015 report. Second, this report does not consider WVU medical facilities.



Table 11: Economic Impact of WVU's Main Campus

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	815.1	460.7	1,275.7
Employment (jobs)	6,609	3,648	10,257
Employee Compensation (\$, millions)	577.1	140.6	717.7
Total Taxes (\$, millions)*	24.1	6.5	31.2
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	117.8	117.8
Employment (jobs)	n/a	946	946
Employee Compensation (\$, millions)	n/a	30.7	30.7
Total Taxes (\$, thousands)*	n/a	846.6	846.6
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	815.1	578.5	1,393.6
Employment (jobs)	6,609	4,593	11,202
Employee Compensation (\$, millions)	577.1	171.4	748.4
Total Taxes (\$, millions)*	24.1	7.4	32.0

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



3.12 West Virginia University Institute of Technology⁸

West Virginia University Institute of Technology (WVU Tech) had a fiscal year 2015 budget of approximately \$25.9 million, of which \$3.6 million in depreciation, scholarships,⁹ and inter-university transfers was excluded from the direct impact. The university spent about \$16.1 million on compensation for the university's 252 employees, and the remaining \$6.5 million was allocated as other university spending. We estimate that the college's operational expenditures generated \$12.7 million in secondary economic activity for a total economic impact of \$35.3 million (see Table 10). These expenditures supported 361 jobs with total compensation of \$20.2 million. Spending by the university indirectly generated approximately \$860 thousand in selected state tax revenue.

Fall 2014 student enrollment at WVU Tech was 1,261 students, of which 293 were out-of-state residents. We estimate that the total impact on the local economy of out-of-state student expenditures was approximately \$2 million in business volume. This spending supported 17 jobs with employee compensation of about \$486 thousand. Student expenditures also supported about \$13 thousand in various state taxes.

We estimate that the total annual economic impact of WVU Tech on the local economy was about \$37.3 million in FY 2015. Approximately 378 workers were either directly employed by the university or supported by the economic activity generated by the university. These employees earned \$20.7 million in compensation and generated about \$874 thousand in state tax revenue.

⁸ This section represents the total economic footprint of WVU Tech in the Beckley MSA, which includes Raleigh and Fayette counties. In 2015, WVU announced that WVU Tech will be moved to Beckley, and we plan to issue a report detailing the effect of this move on the Fayette County economy specifically.

⁹ Part-time student employment wages were also excluded.



Table 12: Economic Impact of West Virginia University Institute of Technology

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	22.6	12.7	35.3
Employment (jobs)	252	109	361
Employee Compensation (\$, millions)	16.1	4.1	20.2
Total Taxes (\$, thousands)*	671.5	188.6	860.1
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	2.0	2.0
Employment (jobs)	n/a	17	17
Employee Compensation (\$, thousands)	n/a	485.8	485.8
Total Taxes (\$, thousands)*	n/a	13.4	13.4
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	22.6	14.8	37.3
Employment (jobs)	252	126	378
Employee Compensation (\$, millions)	16.1	4.6	20.7
Total Taxes (\$, thousands)*	671.5	202.0	873.5

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4 Economic Impact of Two-Year Colleges

In this section we examine the economic impact of West Virginia's nine two-year community and technical colleges. While these colleges do not generally award bachelor's degrees,¹⁰ they serve an essential educational role in training and re-training the state's workforce.

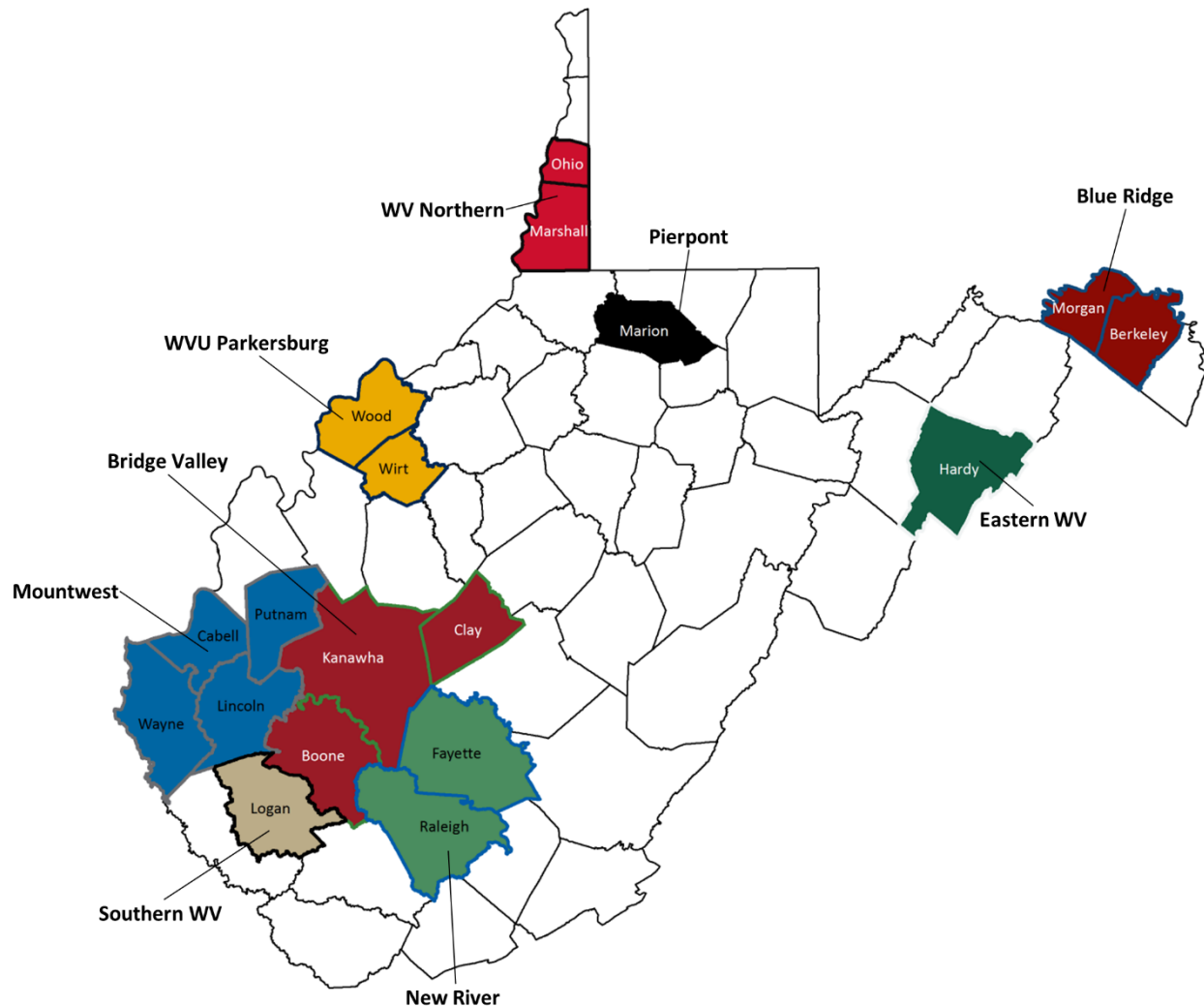
As mentioned above, community and technical colleges generally serve in-state students, and those that are from out of state are generally commuting to the school. Because of this, students attending community and technical colleges are less likely to be bringing in money from outside the state than those at four-year institutions. Thus these expenditures represent transfers from one part of the state to another, or money that would have been spent in the local economy regardless of whether they were attending the institution. For this reason, we will ignore the economic impact of student expenditures for two-year institutions of higher education.

¹⁰ West Virginia University at Parkersburg awards a limited number of bachelor's degrees each year, but is considered a two-year college by the WV Higher Education Policy Commission.



As for the four-year institutions, we consider the economic impact of each two-year college on the metropolitan statistical area (MSA) where it is located. If the institution is located outside an MSA, we consider the impact on its home county. Figure 8 shows the location of each school and the counties that are included in the analysis of its economic impact.

Figure 8: Location of Economic Impact for Two-Year Institutions



4.1 Blue Ridge Community and Technical College

Blue Ridge Community and Technical College had a fiscal year 2014 budget of approximately \$18.4 million, of which \$5.7 million went to depreciation and scholarships. The college spent about \$9 million on compensation for the university's 271 employees, and the remaining \$3.7 million was allocated as other university spending.

We estimate that the college's operational expenditures generated \$6.4 million in secondary economic activity for a total economic impact of \$19.1 million (see Table 13). These expenditures supported 326 jobs with total compensation of \$10.8 million. Spending by the university indirectly generated approximately \$467 thousand in selected state tax revenue.

Table 13: Economic Impact of Blue Ridge Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	12.7	6.4	19.1
Employment (jobs)	271	55	326
Employee Compensation (\$, millions)	9.0	1.8	10.8
Total Taxes (\$, thousands)*	374.8	83.2	466.9

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.2 BridgeValley Community and Technical College

BridgeValley Community and Technical College was formed in 2014 through the merger of Bridgemont and Kanawha Valley CTCs. Because of this change, the data presented here is for fiscal year 2015. BridgeValley's FY2015 budget was approximately \$23.5 million, with \$5.7 million in depreciation and scholarships deducted from the direct impact. The college spent about \$12.5 million on compensation for the university's 266 employees, and the remaining \$5.2 million was allocated as other university spending.

We estimate that the college's operational expenditures generated \$12.3 million in secondary economic activity for a total economic impact of \$30.1 million (see Table 14). These expenditures supported 352 jobs with total compensation of \$16.6 million. Spending by the university indirectly generated approximately \$725 thousand in selected state tax revenue.

Table 14: Economic Impact of BridgeValley Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	17.7	12.3	30.1
Employment (jobs)	266	86	352
Employee Compensation (\$, millions)	12.5	4.1	16.6
Total Taxes (\$, thousands)*	522.1	190.6	725.2

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.3 Eastern West Virginia Community and Technical College

Eastern West Virginia Community and Technical College's fiscal year 2014 budget was approximately \$6.2 million, of which \$1.5 million was allocated to depreciation and scholarships. The college spent about \$2.8 million on compensation for the university's 105 employees, and the remaining \$1.8 million was allocated as other university spending.

We estimate that the college's operational expenditures generated \$1 million in secondary economic activity for a total economic impact of \$5.6 million (see Table 15). These expenditures supported 70 jobs with total compensation of \$3.1 million. Spending by the university indirectly generated approximately \$133 thousand in selected state tax revenue.

Table 15: Economic Impact of Eastern West Virginia Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	4.6	1.0	5.6
Employment (jobs)	60	10	70
Employee Compensation (\$, millions)	2.8	0.3	3.1
Total Taxes (\$, thousands)*	117.7	12.1	133.1

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.4 Mountwest Community and Technical College

Mountwest Community and Technical College's fiscal year 2014 budget was approximately \$17.6 million, with \$4.4 million in depreciation, interest and scholarships. The college spent about \$9.1 million on compensation for the university's 287 employees, and the remaining \$4.1 million was allocated as other university spending.

We estimate that Mountwest's operational expenditures generated \$8.6 million in secondary economic activity for a total economic impact of \$21.7 million (see Table 16). These expenditures supported 353 jobs with total compensation of \$11.6 million. Spending by the university indirectly generated nearly \$508 thousand in selected state tax revenue.

Table 16: Economic Impact of Mountwest Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	13.2	8.6	21.7
Employment (jobs)	287	66	353
Employee Compensation (\$, millions)	9.1	2.6	11.6
Total Taxes (\$, thousands)*	377.5	120.9	507.6

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.5 New River Community and Technical College

New River Community and Technical College's fiscal year 2014 budget was approximately \$22.9 million, with \$4.4 million in depreciation, interest and scholarships. The college spent about \$12.3 million on compensation for the university's 292 employees, and the remaining \$6.3 million was allocated as other university spending.

We estimate that New River's operational expenditures generated \$12 million in secondary economic activity for a total economic impact of \$30.6 million (see Table 17). These expenditures supported 393 jobs with total compensation of \$15.9 million. Spending by the university indirectly generated approximately \$693 thousand in selected state tax revenue.

Table 17: Economic Impact of New River Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	18.6	12.0	30.6
Employment (jobs)	292	101	393
Employee Compensation (\$, millions)	12.3	3.6	15.9
Total Taxes (\$, thousands)*	511.0	169.4	693.4

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.6 Pierpont Community and Technical College

Pierpont Community and Technical College's fiscal year 2014 budget was approximately \$26.2 million, with \$5.4 million in depreciation, interest and scholarships. The college spent about \$8.9 million on compensation for the university's 267 employees, and the remaining \$11.8 million was allocated as other university spending.

We estimate that Pierpont operational expenditures generated \$13.3 million in secondary economic activity for a total economic impact of \$33.9 million (see Table 18). These expenditures supported 368 jobs with total compensation of \$12.5 million. Spending by the university indirectly generated nearly \$553.9 thousand in selected state tax revenue.

Table 18: Economic Impact of Pierpont Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	20.7	13.1	33.9
Employment (jobs)	267	101	368
Employee Compensation (\$, millions)	8.9	3.6	12.5
Total Taxes (\$, thousands)*	372.5	166.9	553.9

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.7 Southern West Virginia Community and Technical College

Southern West Virginia Community and Technical College had a fiscal year 2014 budget of approximately \$19.9 million, of which \$3.6 million in depreciation and scholarships was removed from the direct impact. The college spent about \$11.3 million on compensation for the university's 277 employees, and the remaining \$5 million was allocated as other university spending.

We estimate that Southern's operational expenditures generated \$8.4 million in secondary economic activity for a total economic impact of \$24.7 million (see Table 19). These expenditures supported 339 jobs with total compensation of \$13.5 million. Spending by the university indirectly generated nearly \$586 thousand in selected state tax revenue.

Table 19: Economic Impact of Southern WV Community and Technical College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	16.3	8.4	24.7
Employment (jobs)	277	62	339
Employee Compensation (\$, millions)	11.3	2.2	13.5
Total Taxes (\$, thousands)*	469.3	105.3	586.1

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.8 West Virginia Northern Community College

West Virginia Northern Southern Community College had a fiscal year 2014 budget of approximately \$17.2 million, of which \$3.5 million in depreciation and scholarships was removed from the direct impact. The college spent about \$9.1 million on compensation for the university's 255 employees, and the remaining \$4.6 million was allocated as other university spending.

We estimate that Southern's operational expenditures generated \$7.9 million in secondary economic activity for a total economic impact of \$21.5 million (see Table 19). These expenditures supported 321 jobs with total compensation of \$11.5 million. Spending by the university indirectly generated nearly \$502 thousand in selected state tax revenue.

Table 20: Economic Impact of West Virginia Northern Community College

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	13.7	7.9	21.5
Employment (jobs)	255	66	321
Employee Compensation (\$, millions)	9.1	2.4	11.5
Total Taxes (\$, thousands)*	380.8	111.7	502.1

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



4.9 West Virginia University at Parkersburg

West Virginia University at Parkersburg had a fiscal year 2014 budget of approximately \$26.4 million, of which \$5.8 million in depreciation, interest, and scholarships was removed from the direct impact. The college spent about \$14.3 million on compensation for the university's 368 employees, and the remaining \$6.4 million was allocated as other university spending.

We estimate that WVU Parkersburg's operational expenditures generated \$12.7 million in secondary economic activity for a total economic impact of \$33.3 million (see Table 21). These expenditures supported 479 jobs with total compensation of \$18.1 million. Spending by the university indirectly generated more than \$789 thousand in selected state tax revenue.

Table 21: Economic Impact of West Virginia University at Parkersburg

	Operational Expenditures		Total Economic Impact
	Direct Impact	Indirect & Induced Impact	
Business Volume (\$, millions)	20.6	12.7	33.3
Employment (jobs)	368	111	479
Employee Compensation (\$, millions)	14.3	3.9	18.1
Total Taxes (\$, thousands)*	594.4	180.3	789.2

*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes



5 Total Statewide Economic Impact

West Virginia's public institutions of higher education provide a significant foundation for the state's economy. In this section we consider the total impact of these institutions on the entire state economy.¹¹ We also compare the investment of the state's appropriations to each school with the economic impact that school represents.

As shown in Table 22, operational expenditures at West Virginia's colleges and universities generated more than \$2.5 billion in economic impact in the state in 2014. These institutions employed more than 14 thousand people directly, and supported nearly 8 thousand additional jobs throughout the state. These employees earned about \$1.3 billion in total compensation, and generated more than \$58 million in tax revenue for the state government.

Students from outside West Virginia brought in nearly \$215 million in household expenditures in 2014. These dollars supported more than 1,700 jobs throughout the state with workers earning more than \$55 million in total compensation. Student expenditures returned about \$1.5 million to the state in the form of tax revenue.

Together, West Virginia's colleges and universities were responsible for almost \$2.7 billion in economic activity in the state in 2014. These institutions and their students supported more than 24 thousand jobs, with compensation of \$1.4 billion. This economic activity generated more than \$60 million in tax revenue for the state.

¹¹ The impact numbers in this section are calculated as the total impact on the state as a whole, and are not equivalent to the sum of the individual metropolitan area effects in the previous sections.



Table 22: Total Statewide Economic Impact of All Institutions of Higher Education

Operational Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, billions)	1.5	1.0	2.5
Employment (jobs)	14,644	7,959	22,603
Employee Compensation (\$, billions)	1.0	0.3	1.3
Total Taxes (\$, millions)*	43.4	14.3	58.8
Student Expenditures			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, millions)	n/a	214.8	214.8
Employment (jobs)	n/a	1,743	1,743
Employee Compensation (\$, millions)	n/a	55.4	55.4
Total Taxes (\$, millions)*	n/a	1.5	1.5
Total Impact			
	Direct Impact	Indirect & Induced Impact	Total Economic Impact
Business Volume (\$, billions)	1.5	1.2	2.7
Employment (jobs)	14,644	9,702	24,346
Employee Compensation (\$, billions)	1.0	0.4	1.4
Total Taxes (\$, millions)*	43.4	15.8	60.3

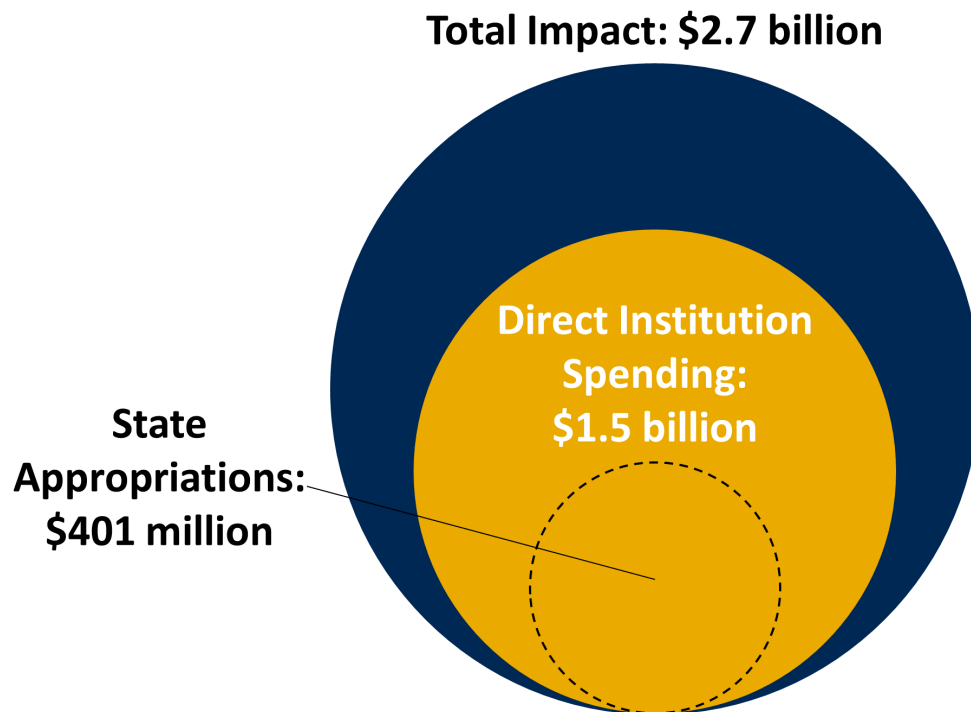
*Includes revenues from personal incomes taxes, sales taxes, and corporation net income taxes

5.1 Economic Activity Compared with State Appropriations

The State of West Virginia provides a significant proportion of the budgets of the state's colleges and universities. The state's total direct appropriation to all institutions in fiscal year 2014 was approximately \$401 million, representing about one-quarter of the total budget for these institutions. As depicted in Figure 9, when combined with tuition, student spending, and other sources of revenue, the economic impact of the state's colleges and universities was almost 7 times the state's appropriation amount.



Figure 9: Total Impact Compared with State Appropriations

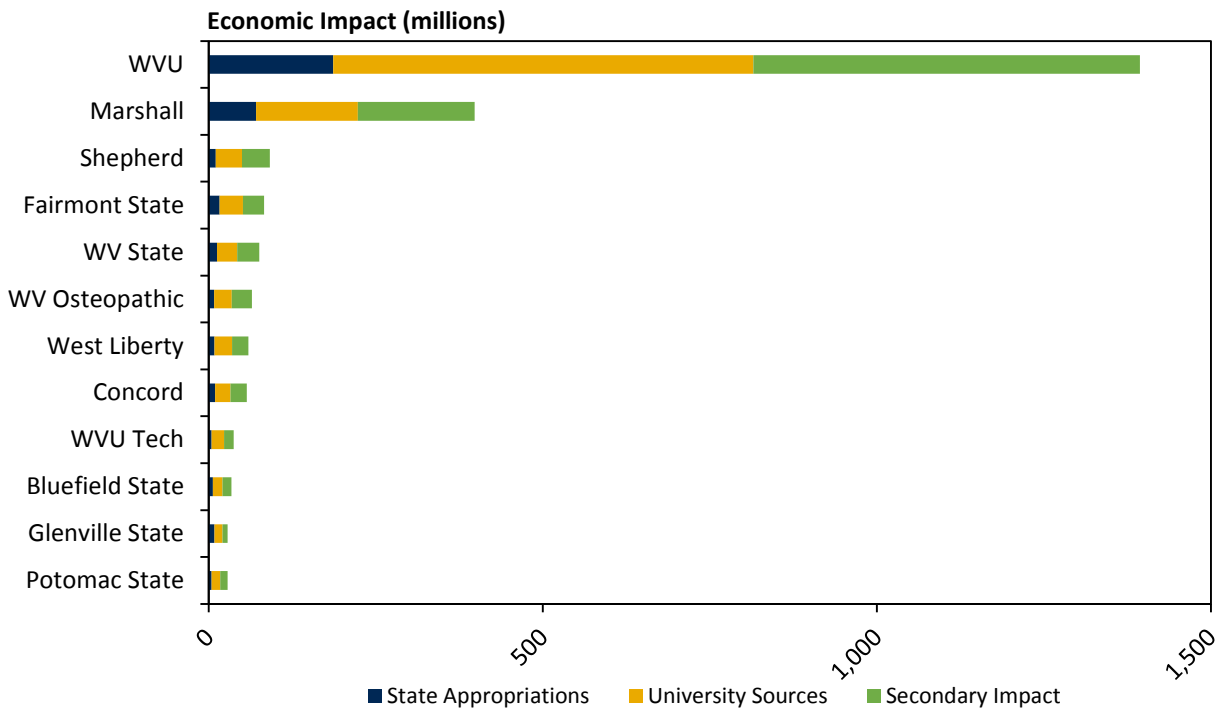


State appropriations were not uniform across all of the institutions. As shown in Figures 10 and 11, the larger universities received a greater share of total state appropriations.

West Virginia University received the largest share of state revenue, amounting to about \$186 million in state appropriations in 2014, which constituted almost 20 percent of its total operational budget. WVU also had the largest impact in the state's economy, totaling \$1.4 billion, which was about 7.5 times the size of the state's appropriation.

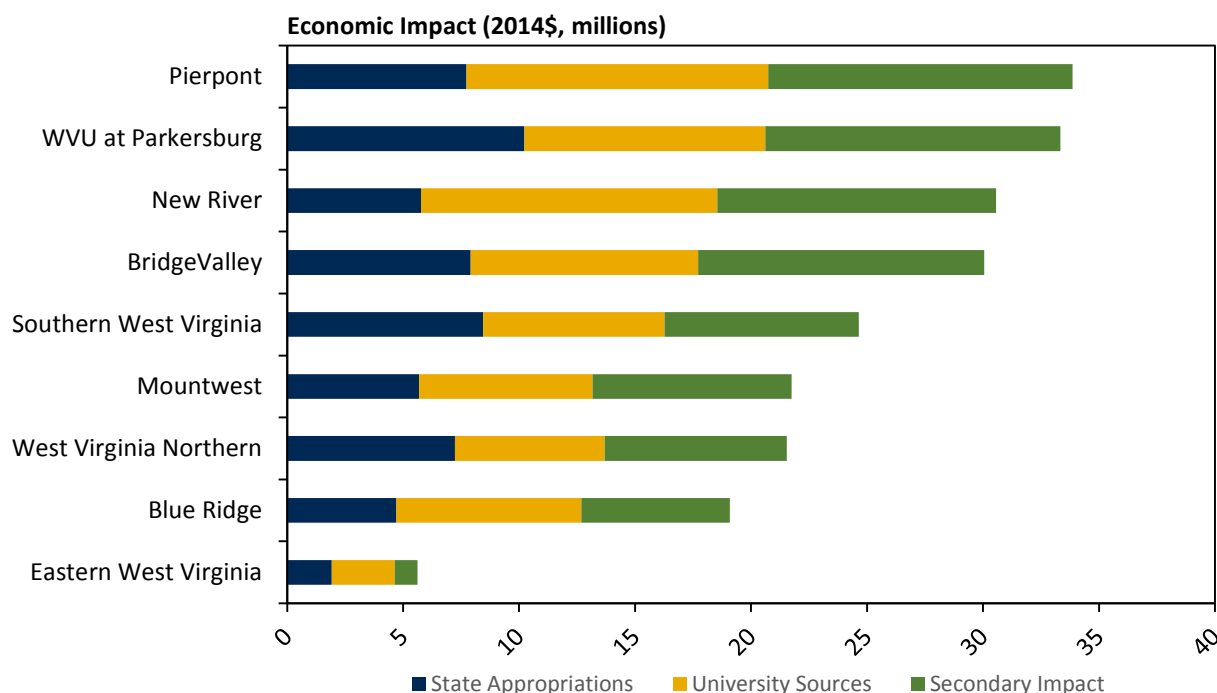
Marshall University received approximately \$71 million in state appropriations in 2014, which was approximately 27 percent of its budget. Marshall's total economic impact was about \$398 million, which is about 5.6 times its state revenue amount. The remaining four-year institutions received about \$84 million in state appropriations, with a total economic impact of \$548, producing a ratio of about \$6.50 in economic impact for every dollar of state appropriations.

Figure 10: Components of the Economic Impact for Four-Year Institutions



WVU at Parkersburg received the largest share of state appropriations among two-year colleges. The college received approximately \$10 million in revenue from the state, compared with about \$33 million in economic impact, a ratio of \$3.30 in economic impact for every dollar of state revenue. Among two-year colleges, New River produced the largest difference between state appropriations and economic impact with a ratio of \$5.30 for every dollar.

Figure 11: Components of the Economic Impact for Two-Year CTCs



Source: IPEDS, Author Calculations

This economic impact cannot be interpreted as a marginal return on investment for West Virginia, as an additional \$100 million in state funding would not result in an additional \$700 million in economic activity. However, it does indicate that state funding provides a strong foundation for higher education institutions, and generates a wide range of benefits to the state's economy.

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Since the 1940s, the BBER's mission has been to serve the people of West Virginia by providing the state's business and policymaking communities with reliable data and rigorous applied economic research and analysis that enables the state's leaders to design better business practices and public policies. BBER research is disseminated through policy reports and briefs, through large public forums, and through traditional academic outlets. BBER researchers are widely quoted for their insightful research in state and regional news media. The BBER's research and education/outreach efforts to public- and private-sector leaders are typically sponsored by various government and private-sector organizations.

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